REMARKS

Claims 1-22 were pending in this application.

Claims 1-22 have been rejected.

Claims 9 and 17 have been amended as shown above.

Claims 1-22 remain pending in this application.

Reconsideration and full allowance of Claims 1-22 are respectfully requested.

I. OBJECTIONS TO SPECIFICATION

The Office Action objects to the specification because a "hard disk drive" is numbered 105 in the specification and is numbered 103 in Figure 1. The Applicant has amended the specification to refer to a "hard disk drive 103."

The Office Action also objects to the specification because "RAM addresses" contained in the specification differ from "RAM addresses" shown in Figure 4. The Applicants respectfully note that a proposed drawing amendment was mailed on March 10, 2003 and received by the U.S. Patent and Trademark Office on March 17, 2003. The proposed drawing amendment proposed to amend Figure 4 to make the RAM addresses shown in Figure 4 consistent with the RAM addresses contained in the specification. As a result, the RAM addresses in the specification and in amended Figure 4 are consistent. A copy of the proposed drawing amendment is included in Appendix A for the convenience of the Examiner.

Accordingly, the Applicants respectfully request withdrawal of the objections.

II. REJECTION UNDER 35 U.S.C. § 103

The Office Action rejects Claims 1-22 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,182,238 to Cooper ("*Cooper*") in view of U.S. Patent No. 4,530,051 to Johnson et al. ("*Johnson*"). This rejection is respectfully traversed.

In *ex parte* examination of patent applications, the Patent Office bears the burden of establishing a *prima facie* case of obviousness. MPEP § 2142; *In re Fritch*, 972 F.2d 1260, 1262, 23 U.S.P.Q.2d 1780, 1783 (Fed. Cir. 1992). The initial burden of establishing a *prima facie* basis to deny patentability to a claimed invention is always upon the Patent Office. MPEP § 2142; *In re Oetiker*, 977 F.2d 1443, 1445, 24 U.S.P.Q.2d 1443, 1444 (Fed. Cir. 1992); *In re Piasecki*, 745 F.2d 1468, 1472, 223 U.S.P.Q. 785, 788 (Fed. Cir. 1984). Only when a *prima facie* case of obviousness is established does the burden shift to the applicant to produce evidence of nonobviousness. MPEP § 2142; *In re Oetiker*, 977 F.2d 1443, 1445, 24 U.S.P.Q.2d 1443, 1444 (Fed. Cir. 1992); *In re Rijckaert*, 9 F.3d 1531, 1532, 28 U.S.P.Q.2d 1955, 1956 (Fed. Cir. 1993). If the Patent Office does not produce a *prima facie* case of unpatentability, then without more the applicant is entitled to grant of a patent. *In re Oetiker*, 977 F.2d 1443, 1445, 24 U.S.P.Q.2d 1443, 1444 (Fed. Cir. 1992); *In re Grabiak*, 769 F.2d 729, 733, 226 U.S.P.Q. 870, 873 (Fed. Cir. 1985).

A *prima facie* case of obviousness is established when the teachings of the prior art itself suggest the claimed subject matter to a person of ordinary skill in the art. *In re Bell*, 991 F.2d 781, 783, 26 U.S.P.Q.2d 1529, 1531 (Fed. Cir. 1993). To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or

motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed invention and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. MPEP § 2142.

Cooper recites a fault tolerant task dispatching technique for scheduling multiple tasks. (*Abstract*). A device includes a controller (element 102), which includes a ROM (element 200) and a RAM (element 202). (*Col. 3, Lines 16-17*). The ROM stores various instructions and routines used to schedule the tasks, and the RAM stores instructions to be executed and various operational parameters. (*Col. 3, Lines 19-26*). The controller uses various timers (elements 204 and 206) to detect hardware and software faults, which allows a hung routine to be bypassed without affecting other tasks. (*Col. 4, Line 66 – Col. 5, Line 8*).

The Office Action acknowledges that *Cooper* fails to disclose a multitasking control program that includes a "main routine" and a "plurality of subroutines" callable by the main routine as recited in Claims 1, 9, and 17. (*Office Action, Page 3*). The Office Action also acknowledges that *Cooper* fails to disclose transferring "program execution control" from the main routine to a first one of the plurality of subroutines when the first subroutine is called by the main routine, updating a first one of a "plurality of multitasking vectors" with an "address" of a "decision point" when the first subroutine encounters a decision point in the first subroutine that is "not yet capable of being decided," and transferring "program execution control" back to the

main routine as recited in Claims 1, 9, and 17. (*Office Action, Page 3*). The Office Action asserts that *Johnson* discloses these elements of Claims 1, 9, and 17 and that it would be obvious to combine *Cooper* with *Johnson*. (*Office Action, Pages 3-4*). The Applicants respectfully traverse these assertions.

Johnson recites a method and apparatus for executing portions of a program process on two processors in a multi-processor system. (*Abstract*). A "home processor" begins executing a program process. (*Col. 2, Line 33-37*). When a procedure forming part of the program process is to be executed by a remote processor, the home processor executes a procedure call to initiate the procedure in the remote processor. (*Col. 2, Lines 37-40*). The remote processor executes the procedure and then sends a return message to the home processor along with any generated data, and the home processor continues program execution. (*Col. 2, Lines 54-59*).

Johnson simply recites a system that allows multiple processors to interact and collectively execute a program. More specifically, *Johnson* recites how two or more processors may interact, where one processor executes a program and another processor executes a procedure of the program. *Johnson* lacks any mention of a single "microcontroller" that is capable of executing a multitasking control program as recited in Claims 1, 9, and 17. In particular, *Johnson* lacks any mention of a single "microcontroller" capable of executing a multitasking control program, where program execution control is transferred from a main routine to a subroutine, the subroutine updates a multitasking vector with an address of a decision point upon encountering a decision point that is not yet capable of being decided, and program execution control is transferred back to the main routine as recited in Claims 1, 9, and

17.

Moreover, *Johnson* specifically focuses on a system that uses multiple processors to execute a program. In fact, the whole purpose of *Johnson* is to permit execution of a process by multiple processors. (*Col. 2, Lines 12-15*). Obviousness cannot be established if a proposed modification would "render the prior art invention being modified unsatisfactory for its intended purpose." (*MPEP § 2143.01*). Modifying *Cooper* with *Johnson* would eliminate the whole purpose of *Johnson*, which renders *Johnson* unsuitable for its intended purpose. Because the whole purpose of *Johnson* is to execute a process using multiple processors, the Office Action cannot show that a person skilled in the art would be motivated to use the apparatus of *Johnson* as the single controller of *Cooper*. As a result, the Office Action cannot show that a person skilled in the art would modify *Cooper* with *Johnson* as asserted in the Office Action.

In addition, the Office Action asserts that a person skilled in the art would combine *Cooper* with *Johnson* because it would allow the controller of *Cooper* to update the "status of the subroutines" and to check the subroutine's "progress of execution because if one subroutine fails to terminate the microcontroller becomes incapable of executing any further instructions." (*Office Action, Page 4, First paragraph*). However, *Cooper* already recites a mechanism for tracking the status of subroutines (various flags) and a mechanism for identifying and terminating subroutines that have hanged (various timers). (*Col. 3, Lines 39-65; Col. 4, Line 66 – Col. 5, Line 8*). As a result, there is no need to modify *Cooper* as suggested in the Office Action because *Cooper* already includes the functionality forming the basis for combining *Cooper* with *Johnson*.

For these reasons, the Office Action has not established a *prima facie* case of obviousness against Claims 1, 9, and 17 (and their dependent claims). Accordingly, the Applicants respectfully request withdrawal of the § 103 rejection and full allowance of Claims 1-22.

III. CONCLUSION

As a result of the foregoing, the Applicants assert that the claims in this application are in condition for allowance and respectfully request an early allowance of such claims.

SUMMARY

If any issues arise, or if the Examiner has any suggestions for expediting allowance of this application, the Applicants respectfully invite the Examiner to contact the undersigned at the telephone number indicated below or at *wmunck@davismunck.com*.

The Commissioner is hereby authorized to charge any additional fees connected with this communication (including any extension of time fees) or credit any overpayment to Davis Munck Deposit Account No. 50-0208.

Respectfully submitted,

DAVIS MUNCK, P.C.

Date: March 31, 2004

William A. Munck
Registration No. 39,308

P.O. Drawer 800889
Dallas, Texas 75380
(972) 628-3600 (main number)
(972) 628-3616 (fax)
E-mail: *wmunck@davismunck.com*

APPENDIX A

Copy of Proposed Drawing Amendment

Filed March 10, 2003